

REMARKS

All of the claims have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting over three copending applications (09/811,542, 09/805,239, and 09/787,956). It is believed that the accompanying Terminal Disclaimer will render that rejection moot.

Claims 1, 2, 7 and 8 have been rejected under 35 USC § 112, second paragraph, as being indefinite. This rejection is respectfully traversed.

Applicants agree with the examiner that the second occurrence of the word "system" in the claims was redundant. The "system" includes a free radical initiator and the liquid polyalkylene glycol solvent. The amended claims are considered to be free of that objection.

Conventional product-by-process language has been used in amended claim 7. Claim 8 has been amended so that, like claim 9, it uses the word "containing" which is believed to be clear.

All of the claims have been rejected under 35 USC § 103 as being unpatentable over GB 922459. This rejection is respectfully traversed.

The polyethylene glycols disclosed by the reference must have a molecular weight "of 10000 up to several millions." They may be water soluble or water insoluble, see p. 2, lines 68-71. Polyethylene glycols with a molecular weight over 1,000 are solid at room temperature. See example 3 of the reference and see the attached pages from BASF technical brochures. "Fest" means "solid" and "pulver" means "powder." The

BASF documents illustrate that a polyethylene glycol with a molecular weight of 300 is in fact a liquid.

The object of applicants' invention was the development of a safe polymerization process in which the free radical initiator could be more easily metered than in the prior art. That object is achieved by using a free radical initiator system wherein the free radical initiator is dissolved in a "liquid" polyalkylene glycol.

The examiner appears to have confused the meaning of the terms "liquid" and "water soluble." The solid polyalkylene glycols disclosed by the reference are, in many cases, water soluble, but they are not "liquid." In other words, the examiner's statement that "water-soluble polyethylene glycols are liquid polyethylene glycols" is erroneous. The issue of whether it would have been obvious to use a "liquid" polyethylene glycol in view of the reference disclosure has not actually been dealt with, i.e., the examiner's statement of rejection is based on an erroneous interpretation of the language used in the reference.

It should be noted that the amendments presented herein relate only to formalities and could by no stretch of the imagination be considered to require the citation of new references.

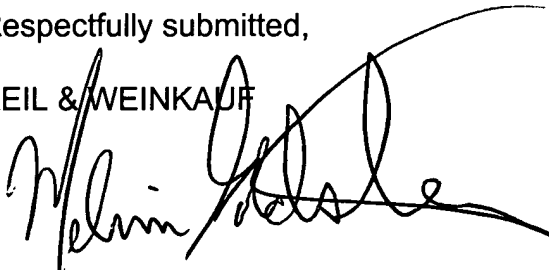
In light of the foregoing amendments and remarks, it is believed that all of the rejections of record have been obviated and allowance of this application is respectfully requested.

A check in the amount of \$510.00 is attached to cover the required two month extension fee and the fee for the Terminal Disclaimer.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

KEIL & WEINKAUF

A handwritten signature in black ink, appearing to read 'Melvin Goldstein', written over the printed name and firm name.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT

Amend the abstract as follows:

[Process for preparing water-soluble or water-dispersible polyether-containing polymers and the use thereof as coating agents, binders and/or film-forming excipients in pharmaceutical dosage forms or packaging materials or as additives in cosmetic, dermatological or hygienic preparations

Abstract]

ABSTRACT OF THE DISCLOSURE

A process for preparing graft copolymers of polyvinyl esters by polymerization of

- a) at least one vinyl ester of aliphatic C₁-C₂₄-carboxylic acids in the presence of
- b) polyethers which are solid at room temperature and have the general formula I,
- c) and, where appropriate, at least one other monomer

using a free-radical organic initiator system, wherein liquid polyalkylene glycol is used as solvent for the free-radical initiator system (feed).

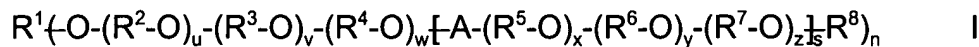
IN THE CLAIMS

Amend the claims as follows:

1. (twice amended) A process for preparing graft copolymers of polyvinyl esters by polymerization of

- a) at least one vinyl ester of aliphatic C₁-C₂₄-carboxylic acids in the presence of

b) polyethers which are solid at room temperature and have the general formula I



in which the variables have the following meaning, independently of one another:

R^1 hydrogen, C_1-C_{24} -alkyl, $R^9-C(=O)-$, $R^9-NH-C(=O)-$, polyalcohol residue;

R^8 hydrogen, C_1-C_{24} -alkyl, $R^9-C(=O)-$, $R^9-NH-C(=O)-$;

R^2 to R^7 $-(CH_2)_2-$, $-(CH_2)_3-$, $-(CH_2)_4-$, $-CH_2-CH(CH_3)-$, $-CH_2-CH(CH_2-CH_3)-$,
 $-CH_2-CHOR^{10}-CH_2-$;

R^9 C_1-C_{24} -alkyl;

R^{10} hydrogen, C_1-C_{24} -alkyl, $R^9-C(=O)-$;

A $-C(=O)-O-$, $-C(=O)-B-C(=O)-O-$, $-C(=O)-NH-B-NH-C(=O)-O-$;

B $-(CH_2)_t-$, arylene, optionally substituted;

n 1 to 8;

s 0 to 500;

t 1 to 12;

u 1 to 5000;

v 0 to 5000;

w 0 to 5000;

x 1 to 5000;

y 0 to 5000;

z 0 to 5000

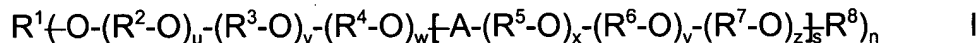
c) and, where appropriate, at least one other monomer

using a free-radical initiator system, wherein liquid polyalkylene glycol is used as solvent for the free-radical initiator [system].

2. (amended) A process as claimed in claim 1, wherein the solution of the free-radical initiator [system] is added continuously throughout the polymerization reaction time.

7. (twice amended) Graft copolymers of polyvinyl esters [obtainable by] which are the products of the process of polymerization of

- a) at least one vinyl ester of aliphatic C₁-C₂₄-carboxylic acids in the presence of
- b) polyethers which are solid at room temperature and have the general formula I



in which the variables have the following meaning, independently of one another:

R¹ hydrogen, C₁-C₂₄-alkyl, R⁹-C(=O)-, R⁹-NH-C(=O)-, polyalcohol residue;

R⁸ hydrogen, C₁-C₂₄-alkyl, R⁹-C(=O)-, R⁹-NH-C(=O)-;

R² to R⁷ -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -CH₂-CH(CH₃)-, -CH₂-CH(CH₂-CH₃)-,
-CH₂-CHOR¹⁰-CH₂-;

R⁹ C₁-C₂₄-alkyl;

R¹⁰ hydrogen, C₁-C₂₄-alkyl, R⁹-C(=O)-;

A -C(=O)-O-, -C(=O)-B-C(=O)-O-, -C(=O)-NH-B-NH-C(=O)-O-;

B -(CH₂)_t-, arylene, optionally substituted;

n 1 to 8;

s 0 to 500;

t 1 to 12;
u 1 to 5000;
v 0 to 5000;
w 0 to 5000;
x 1 to 5000;
y 0 to 5000;
z 0 to 5000

c) and, where appropriate, at least one other monomer
using a free-radical initiator system, wherein liquid polyalkylene glycol is used as
solvent for the free-radical initiator [system].

8. (amended) Coating agents, binders or film-forming excipients for pharmaceutical
dosage forms [comprising] containing a polymer produced by the process of claim 1.